THE TENNESSEE FARMER.

BY THOMAS EMMERSON, AT $1 PER ANNUM IN ADVANCE—OR $1 50 AT THE END OF THE YEAR.

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PROSPECTS OF AGRICULTURE IN THE UNITED STATES.

That an almost total revolution in the agriculture of the United States will ere long have been effected, we think can admit of no reasonable doubt. It therefore behoves all those,and they constitute the great mass of our population, who depend for their subsistence on this most ancient, most useful, and most honorable of all occupations, to be industrious in preparing themselves for the approaching change, by acquiring all that information which is necessary to enable them to adapt their course to that new state of things by which they will shortly be surrounded, and to which they must accommodate themselves, if they wish to participate in that general prosperity which awaits the intelligent, the enterprizing, and the industrious cultivators of the earth.

Amongst the causes which may reasonably and confidently be expected to produce the anticipated change in the agriculture of our country, the following are the most prominent, and are of themselves, amply sufficient to produce it.

First—The spirit of agricultural improvement is aroused and is rapidly extending itself over the whole country. People are beginning to discover at last, that the occupier of exhausted land, badly cultivated, cannot successfully compete with the judicious cultivator of improved, rich, and well tilled land—because the latter, with less expense, can make two bushels of grain to his one, and because this great disparity must every year increase in proportion to the progressive exhaustion of the first and improvement of the latter.

Secondly—The rapid extension of internal improvements, such as rail roads and canals, are fast placing the agriculturists of the whole nation in a situation to compete with each other on nearly equal terms as respects the expense of transportation to market in the sale of all the products of the country: the consequence must be, that every section will be compelled to confine itself to the cultivation of such articles only, as are best adapted to its soil and climate.

Thirdly—The introduction of new articles of culture, and especially of Silk, and Beet Sugar, the speedy success of both which, to an immense extent, there is every reason to expect, will draw off a large portion of labor from the cultivation of the articles now reared—and fourthly, the great increase of manufactures, the necessary consequence of the increased facilities of transportation, and of the production of the raw material, by increasing to an incalculable extent, the demand for many articles now scarcely cultivated for sale, except in the neighborhood of large towns, will cause much of the labor now devoted to other articles to be employed in their production. The great body of farmers, may, therefore, calculate with certainty, that the period is not very remote, when they will be compelled to give to their industry a very different direction from that which habit and existing circumstances have heretofore prescribed to it. How important then must it be to every farmer to acquire that agricultural knowledge, without which he must be wholly unprepared for those changes in the state of his profession, which are rapidly approaching and which he cannot possibly avert. Without the acquisition of this knowledge, the farmers and planters of the old school, will soon find themselves in most uncomfortable situations, from which, nothing short of its acquisition can relieve them. This will require time and practice: the interval employed in the acquisition of this knowledge, if now neglected, must be most adverse to their interests, and in many cases will prove ruinous.—We exhort them therefore to spare no pains to keep pace with all the agricultural improvements of the age, that, when compelled to abandon their present practices, they may be prepared to substitute more eligible ones in their stead.

[COMMUNICATED.]

NEW METHOD OF STACKING OATS.

In passing a Farm belonging to Capt. John E. Baker, and seeing a very large and singularly formed Oat Stack, I was led to enquire of him his motive for saving his Oats in this way, and his method of putting them up. He informed me, that last year his Oats were in danger of being lost from the frequent showers which fell after they were cut, and that, from necessity, he fell on the following plan to save them: He took forks, and set them in a row, after the method of making a Fodder-house; then, setting rails or poles with proper slant against the ridge-pole (say six to ten inches apart,) he commenced building his Oats on the rails, and topped the stack in a way to secure it from the weather. Capt. Baker is a tolerably extensive Farmer, and is very methodical in his arrangements—scrupulously economical in saving what he has made, and punctual in his transactions. Should any person feel inclined to adopt this method of saving their Oats, there is no doubt but they will be amply repaid for their labor. The three following considerations I would deem a sufficient inducement to try the experiment. 1st, The air having a free passage through the centre, the oats (if necessity require) may be put up (in a measure) green or wet, and become thoroughly cured and dried. 2d, A se-

cure and comfortable place may be made of this for ewes and lambs, or young calves, in cold and stormy weather. And, 3rdly, as rats are extremely destructive on this grain when housed in the barn, or even when stacked in the ordinary way, this method furnishes almost a perfect defence against their depredations, as the buts and tops lie alternately on each other in each layer, and having only about two or three layers on each side of the stack, it is so thin they have little or no chance for committing them. I feel satisfied that this method is a good one, and would recommend a trial of it, by all who are extensively engaged in raising oats. I would further suggest, that if the plan be a good one on a large scale, there is no doubt but that it would be good on a less extensive experiment.

I am not aware of having before seen or heard of this method for saving oats, and the plan being a new one to me, I hope you will accept of this as an apology for troubling you with this long letter.

☞We return our thanks to our correspondent for the subjoined communication which we extract from his letter, as well as for his kind aid in promoting the circulation of the Farmer. Would every one af our patrons who feel a deep interest in the prosperity of agriculture but imitate his example, but with little trouble to themselves, we feel perfectly assured that they would confer on their country an important service, by enabling us to render the Farmer a most efficient instrument in the production of that agricultural improvement which all must admit to be in every point of view in which it can be considered, alike important to public prosperity and to individual happiness and comfort. For ourselves, we are determined to spare no effort in our power to enhance the value of the succeeding volumes of the Farmer, and we earnestly solicit that aid and co-operation of the friends to agriculture, without which, we are well aware, that our labors, however perseveringly exerted, must be comparatively inefficient in the accomplishment of the great object desired.

From the Farmers' Register.

IMPROVEMENT OF WORN LAND.

I submitted some reflections on the improvement of worn land sometime since, with the determination that I would persevere in the attempt to improve my own farm, one of the first settled in my county.

I have advanced, as I said I would, step by step. The thin land, such as would produce not more than a barrel of corn to the thousand hills, I have been manuring for tobacco, and last year made a respectable crop on such land. It is a soft free land, and susceptible of improvement. At the fall the land was sown in wheat, and in February, in clover; the crop of wheat is good and the clover very promising.

A piece of land adjacent managed in the same way the year before, a part of which was very much exhausted, has produced an excellent crop of clover, much mixed with herd's grass, (the product of seeds brought in manure from the stable.)

I am now perfectly satisfied that our exhausted lands may be restored to their original fertility; and so confident am I in the success of the undertaking, that it is a matter of choice to pitch a part of my tobacco crop in such land every year. Indeed, if we were to change our system and cultivate all of our highly manured tobacco lots in grain and grass, we should do but what is sheer justice to our native land. Tobacco mainly killed the soil, and tobacco is justly chargeable with the expense of restoring it.

The improvement of land for corn to much extent, is not to be expected in the present circumstances of the country. Tobacco is the staple crop, and all the manure that can be raised is in requisition for the tobacco land. Now, if the thinner land is manured and cultivated in tobacco, I feel no hesitation in saying (preposterous as the advocates for manuring the richer lands may think it,) the product will be in favor of the poorer land. The tobacco will be respectable, the wheat, and clover following, luxuriant, and the land raised in value 200 per cent.

The manuring of such land should commence early in the fall, covering the land with leaves, or such litter as can be conveniently had, in addition to which, the stable or farm-pen manure is indispensable. The first manuring will then be effectual, putting the land in heart for what is to follow.

In these remarks, I wish not to be understood as recommending the improvement and cultivation of the most exhausted land to the neglect of a better subject for improvement. Any lands that are turfed and would produce more than a barrel to the thousand hills, would certainly be preferable, requiring less manure. The opinion is fast gaining ground, that lands that have long been abandoned as commons, and grown up in pines, &c., if taken up and judiciously managed, produce the finest tobacco. The reason is obvious; these lands were originally the richest; our fathers cleared their best lands first, and as in all new countries, supposed they could not injure them by cultivation. The same system is progressing in Mississippi, and the same result may be expected.

Several of my neighbors have tobacco in lands that produced little or no corn when last cultivated; the lands have been manured by no means heavily, and from present prospects, the tobacco

promises to be good. They covered the land with leaves in the fall and winter.

The improvement of land will advance with the facilities of intercourse; roads, canals, and the navigation of the rivers are now receiving more attention. The public highways are under the management of the county courts, and to improve them systematically, the Legislature has wisely thrown the responsibility on each county to make such improvements on such roads as they may think proper. May we hope they will use the power granted for the good of the Commonwealth? Will the people shrink from a public duty wisely imposed on all males of sixteen and under sixty? I cannot think they will.

Virginia presents a wide field for all the improvements of the day. It is a dear land to all her sons. The traveller to the distant west, can tell his own feelings best, when after a long and wearisome journey he enters on the Old Dominion; his Virginia feelings are awakened; his attachment is renewed, and all his speculations become insignificant, when he thinks of having to leave his native land; but restless spirits must and will go—"there is much land to possess," the land was made to be peopled, and so let it be.

But to the question—What is gained by removal to the west? A man who has a large and expensive family, desiring to settle his children, may, for the sake of them, meet the sacrifice of the conveniences of an older country, his own comfort, and go. But can he look at the expense of building such houses as he will leave, and clearing the heavily timbered lands of the west, and not see that the same amount expended in improving a good old Virginia estate would be as profitable. It is estimated to cost about $10 to clear an acre of land in the west; add to this the lowest price per acre, $1 25, and then erect such houses as a permanent settlement requires, and you have the cost of a western estate.

Has it occurred to many readers of the Register, that it is about as easy to improve an acre of land as to clear one? The felling of timber, grubbing the undergrowth, mauling rails to fence the land, the coultering and putting in order new land for a crop, consumes more time than to litter the same quantity with such means as may be had on most farms. *It is worthy of experiment.*

The friends of agriculture have much to encourage them; they should renew their diligence and utterly disregard the sneers of those who ridicule all improvement. The grand canal of New York, with the able Clinton at the helm, was considered a most preposterous undertaking.—Clinton was driven from the distinguished station of Commissioner, but the work went on, was accomplished, and serves as a monument to perpetuate the fame of its projector. Yes, a more durable monument than the pyramids of Egypt, or such an one as is proposed to honor the immortal Washington; a structure to look on rather than to answer any useful end, more to signalize the folly of the people, than to honor him who has all honor, who will live forever in the memory of a grateful people, without the adventitious aid of a sculptor or painter.*

A system of improvement simple and practical, the community demands; and if, sir, the Register should be the instrument of setting in motion, (as I believe it will) the real improvement of this once fertile Old Dominion, the State will remember the efforts on your part to accomplish the end in view.

S. D. M.

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*We cannot concur with the writer in his views of the proposed monument to the memory of Washington; true, this magnificent and stupendous structure can add nothing to the glory and fame of the Father of his Country, but it can add much to, and perpetuate that of his countrymen, and what is of infinitely greater importance, it can and it will have a powerful influence in stimulating our sons, and the rising generations throughout succeeding ages, in emulating and imitating his virtues. These considerations, we think, should be amply sufficient to induce the American people to rear a structure commemorative of incomparably the greatest man that history has yet described, which shall attract the admiration of all succeeding generations to the end of time.—[Ed. Ten. Far.

AGRICULTURE.

Agriculture, for the purpose of comparison, may be considered as a *trade*, an *art*, and a *science*.

The *trade*, is mechanical, requiring muscular strength. It is imitative—it is to do a thing as one has been taught to do it, or has done it before.—The ox in a measure acquires it. He knows his master and his master's crib; he treads the accustomed furrow, turns at the head lands, and understands and obeys the driver's commands. The mere servile laborer moves in the old routine, without concerning himself about the why and the wherefore, almost unconscious that he has a mind.

The *art* implies a co-operation of the mind with physical power. The mind contrives; it is a lever which greatly assists and abridges the labor of the hands. The mind, like the soil, makes return in proportion to the culture which is bestowed upon it. Both are unproductive without culture. The mind is improved by observation and reading, which makes it familiar with the best models of practice, and enables it to profit

by the improvements of others, in the various departments of husbandry.

The *science* teaches the laws and properties of inorganic matter—as of rocks, earths, manures, &c. &c. of organic matter, as animals and vegetables;—of their structure, food and uses—and of the agency of heat, water, air, light and electricity in their developement and maturity—the employment and adaptation of all these matters for the best uses of man. It concentrates the experience of ages, and the labors of nations, upon these interesting subjects, and makes them subservient to our wants and our comforts. The science is a collection of facts and leading truths. illustrated in practice, and confirmed by experience.

The trade, therefore, may be managed by the hands, the art, requires the co-operation of the mind; while the science superadds to both, a knowledge of the laws and properties of matter, upon which the mind and body are required to exert their energies. The first may be likened to the feeble boy, the second to the muscular young man, and the third to him whose mind and body are in the active developement of their best powers.—*Cultivator.*

STIR THE EARTH.

Somebody has said, that "a rusty hoe in June was a sure sign of a poor farmer," and we are inclined to believe the remark correct. It is an indication that there are weeds in the garden, weeds and grass in the corn, and that the thistle, dock, Johnswort, bur-weed and the thousand other pernicious things that require the application of the hoe are flourishing unmolested. Farmers we think are very apt to underrate the great advantage of clean fields, and frequent stirring of the surface of the earth. It requires as much nourishment to produce one stout weed, as it does to furnish the farmer with a pint of corn; and though few are willing to admit their belief that weeds benefit a crop, yet there are thousands who act as if this were a proposition that could not be disputed. The most slovenly farmer in existence, is pleased with the sight of a house where the yards are all in order, the garden well planted and cultivated, the corn carefully wed and hoed, and the grain crops free from stein krout and the Canada thistle; yet by a singular species of infatuation, what he admires in others he is careless about in his own case, and his whole premises bear most abundant proof that his hoe is habitually rusty in June. There are many who suppose that to work in the garden, or hoe corn, or in short to do any thing which requires the ground should be stirred, is injurious in dry weather, and that in such cases vegetables do better to remain undisturbed. This is a great mistake, and to convince one that it is so, let one spot be stirred every day with a hoe, and another remain untouched, and see, after a few days have elapsed, in which case the moist earth rises nearest the surface. The earth that has been moved will be light and moist, and consequently favorable to vegetation, while the untouched will be dry, hot, and hard, and unfit to be near plants. In hot dry weather to heap the burning earth round a hill of corn or cucumbers, would undoubtedly be injurious, if not fatal; but that does not necessarily follow frequently stirring the surface and keeping it light and loose. All hilling of plants, unless in extraordinary cases, is useless, but worst of all in hot dry weather. The earth heaped around corn or potatoes, as is generally practiced, must be taken from the vicinity of the plants, leaving many of the roots entirely exposed, and more or less subjected to a new and unnatural state of heat. In hot weather then let the hoe be used liberally, but not in heaping up the earth, or hilling plants. Every merchant, mechanic, or professional man should have some garden spot in which he can spend an hour of every summer's morning. In that hour he may not gain as much money perhaps as he would at his desk, but he will find what is better, pure air, sweet flowers, gentle exercise, and in the result of the whole, good spirits and renewed health.—[Genesee Farmer.

From the Southern Planter.

TURNIP FLY.

Mr. Editor—Looking over an old newspaper the other day, I noticed some experiments tried on Turnip seed, to prevent the destructive ravages of the Turnip Fly or grub, which are sometimes very extensive. The experimentalist stated that he discovered the leaves were eaten almost as soon as the plants were up, so that the field was as brown as before it was sown. He thought at first that the insect might have proceeded from other plants, or the hedges. Accordingly, he took some earth from his garden and placed it in a box, sowed his turnip seed in

it, and covered it over with silk gauze so that no insect could enter; but he found them there as destructive as in the open field. He took some earth and boiled it and put it in a box, and sowed the seed, watering it with water also boiled, with no better success than before. Having thus satisfied himself that it proceeded neither from other plants, nor was contained in the earth or water, he turned his attention to the seed, on which by the help of a magnifying glass, he found small white flattish substances, which he concluded were eggs. On some seeds he found none; but generally, two or three, and in some instances five on a single seed. The difficuly now was to destroy them. To accomplish this, he made some strong brine and soaked the seed in it 24 hours. It being dried thoroughly, he then sowed it with all the care mentioned above, and not a single fly found nor turnip injured. He found that if the brine was sufficiently strong three hours soaking was enough. He says, "I now practice this method with Turnip seed, Cabbage seed, and in fact with all the creciform plants in common cultivation, with very satisfactory success. The whole of these experiments were made on the Swedish turnip, which is generally more infested by these beetles than any of the other sorts."

SEED COCOONS.

Silk worms are feeding now and some of them winding their cocoons. The ordinary method is to lay branches over the worms or set broom brush upright, and they will find a position to their own taste. After they have finished winding, those cocoons to be used for reeling must be boiled in hot water a few hours or laid in the sun three or four days, as the moths will come out in about ten days, if not destroyed and spoil the cocoon. Those cocoons which are intended for seed, should be of the largest size and bright color, and firm to the touch. They should be laid away carefully, and in ten or fifteen days, according to the weather, the moths will come out. The male is known by his small size and continual fluttering of his wings. The female is larger and seldom moves. They should be taken in pairs and put upon sheets of paper, and in about twenty-four hours, the female lays three or four hundred eggs. They should be laid away carefully, rolled up, as they adhere to the paper. The moths die soon after the eggs are laid.

Northampton Courier.

LARGE PROFITS.

The Chinese Mulberry, says the Northampton Courier, was sold in this town at 5 dollars a paper. A paper contains seed enough for about two thousand plants, but it is hardly probable they will all vegetate. But supposing only one half do, at a year's growth they are worth 25 cents each, and can be sold readily for that money.—This, it will be seen, gives 250 dollars for what cost 5 dollars. A letter to Dr. Stebbins, from a gentleman in this State, says—"I have now from a paper of seed sold by you two years since, 350 thrifty trees, and I have put out from the same, 1200 cuttings. I have sold about 50 dollars worth of cuttings, all from the seed of one paper." This paper at that time cost but *fifty cents*. Is not this conclusive demonstration?

Demand for Raw Silk.—The demand for raw silk is very great, and for cocoons also. It is thought that the demand will not be supplied by the native production for ten years to come. The farmer, therefore, may have no fear about engaging in the cultivation of the mulberry, and in the feeding of worms.—*ib.*

CASTOR OIL PLANT.

We would invite the attention of farmers to experiments on the culture of the castor oil plant—knowing our soil and climate to be adapted to its growth, and believing it may be made a profitable crop in field cultivation.

The plant to which we allude, and from which castor oil is extracted, is the Ricinis, a native of the East Indies and the north of Africa, a species of which has been acclimated in the West Indies and the United States. It is generally known in this country, by the name of the 'castor oil bean,' and is cultivated in NewJersey, Virginia, North Carolina, and most of the states on the right bank of the Ohio river. It is also extensively cultivated in Illinois, particularly in the counties of Edwards, Randolph and Madison. The manufacture of castor oil was commenced at Edwardsville, in the latter county, by John Adams, in 1825, in which season he made 500 gallons. His business has since increased, so that in 1831 he made 12,500 gallons.

We have had no experience in the cultivation of this plant; but are informed there is nothing peculiar in its management, and that on good land, its product is very abundant. The beans are enclosed in capsules, divided into three cells and contain a large quantity of oleaginous matter of a white color and sweetish taste. There are three methods of extracting the oil—by expression, decoction, and by the agency of alcohol—the former of which is considered the best both on account of the quality of the oil, and the fact that a separation of the bean from the capsule is unnecessary.

The following is the process of extracting the oil adopted in Illinois, and the result is what is called "cold pressed castor oil," which is always

considered best quality. The beans are well cleaned and moderately heated in a furnace, care being taken that the heat be not raised higher than can be endured by the naked hand. They are then placed in an iron cylinder, and a follower is forced upon them by an iron or wooden screw, of great power. The screw is turned by a horse attached to a long & large lever, precisely in the same manner that a nut mill is operated. The usual quantity of oil thus pressed out of a bushel, is about seven quarts. Not knowing the number of bushels that may ordinarily be expected from an acre, we cannot make an estimate of the product and profit of land devoted to the cultivation of this plant. We learn, however, from the Cincinnatti prices current, that the beans are selling from $1,50 to $2,50 a bushel, and castor oil is quoted in the New York prices current from to 1,75 to 2,00 a gallon. The duty on imported castor oil is 40 cents a gallon, and the quality of American cold pressed is esteemed preferable to foreign, and it invariably commands a higher price in market. Experiments on the cultivation of this valuable plant may be easily and cheaply made, and we have no doubt it would be found to be one of our most profitable crops.—*Gen. Far.*

Pickling Beans—Preserving Seed Beans.

The Germans who are good economists in household matters, have a plan of pickling green beans so as to preserve them for winter use.

This may be done by taking the beans in the pods before large enough to shell—string them—cut them into suitable pieces, and pack them down with salt. A board or something heavy should be put upon them to press them down and keep them below the pickle.

Beans large enough to shell may also be packed down in the same manner. In the winter or at any time afterwards they may be taken out—soaked in fresh water, and then cooked as you would common green beans.

There is one thing in preserving beans for seed that should be attended to more generally, than it is—viz. save the earliest. Among those beans which run or climb, there are many found at the bottom of the stalk which get quite ripe long before those at the top of the pole. These should be saved for seed. It is astonishing what a difference a little care in this respect will make in the course of a few years in the ripening of the crop

Maine Farmer.

Transplanting Evergreens—We mentioned in our last volume, that on the 8th July, 1835, we transplanted from the commons, into our court yard, at 2 P. M. under a hot sun, the thermometer at 82°, six white pine trees, from ten to fifteen feet in height, and feathered with limbs nearly to the ground. The six trees are all living, and are making a good growth of new wood. Evergreens are best transplanted, when actually growing, and even when growing vigorously, if the influence of evaporation can be guarded against. In transplanting our trees, a circle of three or four feet was made with the cut of a spade around the tree, & there being no tap roots, it was raised to the cart with the earth attached to the roots. The holes in which they were planted were nearly filled with water, and when the plants were adjusted, coarse barn-yard litter was thrown over the roots; this was well saturated with water, and covered with an inch or two of earth. The trees were watered once or twice afterwards.

Cultivator.

From the Silk Culturist.

BEET SUGAR

Though most farmers are slow to believe they can make as much sugar, and of as good a quality, from an acre of land in New England in beet as a planter can from an acre in the West Indies in cane; yet such is the fact, as established by the most accurate experiments. In our last number we made copious extracts from the correspondence of Mr. Pedder, the agent of the Sugar Beet Society of Philadelphia, showing its practicability in this country, and urging its introduction, as a great national object. We have since seen several specimens of sugar, manufactured by him and sent home for exhibition, which will not suffer in comparison with the best West India, or New Orleans sugar in market.

From the letters of Mr. Pedder it may be inferred, that the process of extracting the sugar from the root is an expensive operation, requiring the aid of complex and costly machinery, & an investment of capital beyond the means of ordinary farmers,—but such is neither the fact nor the idea he means to communicate. It is true in the large sugar establishments in France expensive machinery and fixtures are employed, which doubtless facilitate their operations, and yield a liberal return for the money invested in their construction; but they are not indispensable to the successful pursuit of the business, or even adapted to the circumstances and wants of a farmer who merely manufactures his own sugar. Farm establishments are already in profitable operation in France, and the Royal and Central Society of Agriculture have offered premiums for models of the most simple and cheap machinery for the use of small farmers. A silver medal has already been awarded by the committee to M. Jean J. Lecerf of Valenciennes, of the department of the North. This gentleman is the farmer referred to by Mr. Pedder, as "a curious man residing in one of the back streets, who had made sugar with machine-

ry of his own invention, and almost by the labor of his own hands."

The committee, in awarding the premium to M. Lecerf, thus speak of him and his factory:

"A farmer on a small scale, (Jean Joseph Lecerf,) of Onnaing, Arondissement of Valencienes, department of the North, has anticipated this appeal. In the buildings of his farm he has established his factory, which is composed of but two departments; one of them seventeen feet square, the other of seven feet square, (English.) His machinery for fabricating is placed in the first apartment, and consists—1st, of a rasp turned with a crank by hand—2d, of a hand press, (both of wood,)—3d, three small iron kettles, each one sufficient to contain twenty-five to thirty gallons, (English)—4th, three filterers of the same capacity as the kettles.

"In the other apartment are two kettles of copper, of about the capacity of twenty gallons each, (English)—one used for evaporation, the other for crystallizing. In the same small apartment are ranged moulds for the reception of sugar. The price of all these fixtures or apparatus is not above one hundred and seventy-five dollars.

"The manufacture of brown sugar at this establishment is fifty killogrammes, or one hundred and ten pounds (English) of brown sugar per day.

"M. Leserf, who possesses only the little property where his works are located, devotes himself to it with the aid of his family alone; and far from desiring to make a mystery of his instruments and the process, he is eager to communicate them to his countrymen. The sugar which comes from this factory has been, by one of the most celebrated refiners, M. Lebaudy, acknowledged to be of a perfect quality."

From the foregoing, it will be seen that every farmer may, with trifling expense, furnish himself with the necessary machinery for manufacturing his own sugar. But though it may be practicable, yet, at present it may not be desirable for every farmer to attempt it. There is some little expense attending the construction of sugar works, even on a small scale, which every farmer may not wish to incur, and there is also a degree of skill which they may not be disposed to acquire until they have more confidence in the success and profit of a new project. The best method, therefore, to introduce this new branch of business, is for individuals or companies to erect sugar works in towns and villages, at convenient distances from each other, and purchase of the farmers their crop of beets as they are gathered in the field. Most farmers will cultivate the root if they are assured of a market, when but few will attempt it, if they are compelled to extract the sugar themselves.

A portion of most farms is adapted to the cultivation of the sugar beet though soils of the greatest depth is more peculiarly so. Sandy soils formed by alluvions and deposits of rivers are considered the most favorable, and we know of no lands in the eastern and middle states better adapted to the culture of roots of all kinds than the alluvial meadows in the valley of the Connecticut.—Many of the varieties of the beet have been cultivated in great perfection, particularly in the town of Wethersfield, where the only difficulty experienced has been their growing too large for culinary purposes.

With respect to the profit that may be made from an acre of good land devoted to the culture of the sugar beet it may be stated without incurring the charge of exaggeration, or the hazard of contradiction, that it will not fall short of $150. But we are not disposed to let our readers rest their faith on our mere assertion; but prefer giving them the data on which our opinion is based.—These we have from an intelligent and scientific gentleman, who has given the subject a thorough investigation and who has also some practical knowledge in relation to it. He assumes as the basis of his statement the fact that 1000 bushels can be raised on an acre, and in this he is corroborated by gentlemen who have cultivated the root. *Sixteen hundred* bushels have been raised on an acre; but it was an extraordinary crop.—He next assumes that a bushel will weigh 60 lbs. and in this estimate he cannot be materially mistaken. Numerous experiments have proved that the root yields 7 per cent of sugar, 3 per cent of molasses, and 25 per cent of cake. Calling the sugar worth 7 cts. a pound, the molasses 3 cts., which is considerably below the market price, and the cake as much by the pound as the beet, which is the fact, the account of the product of an acre, 60,000 lbs. will stand thus:

4200 lbs. Sugar at 7 cts. -	$294,00
1800 lbs. Molasses, at 3 cts. -	54,00
15000 lbs. Cake, at 4 mills, - -	60,00
	$408,00
Expenses of cultivating the root and extracting the sugar, - - - - - -	108,00
Nett profit, - - - - - - -	$300,00

In ascertaining the nett profit in the foregoing statement, it will be seen we have deducted $108 for the expense of cultivating the root and extracting the sugar. This is a very liberal allowance, and probably, something like double the amount of the actual cost. Of the expense of cultivating the root every farmer can make accurate calculations for himself, and with regard to the cost of manufacturing the sugar, it will depend materially upon the cost of fuel consumed in the

process of evaporation and machinery and fixtures employed. In sections of the country where fuel is scarce, and consequently high, it cannot exceed the deduction we have made, and in places where it is procured at cheap rates it will fall much below our estimate.

We have other statements of profit, which, together with the process of manufacturing, we intend to give hereafter, and in the mean time would ask farmers to throw away one half of the net profit in our statement, which will bring them to our starting point, $150, and then look about and see if they can devote a portion of their land to a more profitable crop—always excepting the culture of silk.

From the Genesee Farmer.

CULTURE OF STRAWBERRIES.

As the time is now approaching, when those who intend to form beds for raising this cheap and delicious fruit, should make the necessary preparations, a few brief instructions on the subject may not be unacceptable.

Varieties.—The following are a few of those which rank among the best and most desirable varieties. Austrian Scarlet, or Duke of Kent; Grove End Scarlet; Rosberry; Keen's Seedling; Methven; Old Pine; Red and White Alpine; Bush Alpine. The Austrian Scarlet is the earliest of known varieties, and is also of excellent flavor. The red and white Alpine possess the advantage of ripening, when properly managed, through autumn till winter; we have seen a dish of good fruit, picked on the first day of December. The bush Alpine possesses the same advantage, and the additional one of not spreading by runners; it is not, however, a first rate bearer, nor is the fruit of the very best quality.

Propagation.—With the exception of the bush Alpine, which is only increased by divisions of the root, all the varieties multiply spontaneously every season, by numerous runners from the parent plant, which, rooting and forming a plant at every joint, only require, for the production of fruit in abundance, removal to a bed where they may have room to flourish.—Such plants will bear the summer succeeding the planting, and in the second year will be in full perfection. The best way is to supply a new plantation, with plants which have been taken from runners and set out in nursery beds the previous season. But where such cannot be had, those of the present season will answer.

Soil and situation.—Strawberries will grow and produce fruit on almost any soil of moderate fertility; but they are most productive on a deep rich loam. They should be in an open situation, exposed to the sun and air, and not under trees. The Alpine strawberries however, admit of being placed in a more shady situation, as it is during the hot and dry season of the year that they are intended for bearing; which they will not do if allowed to suffer from drought; and few are willing to take the pains to water them as much as they would require.

Transplanting.—The best time for doing this is in the spring; but if performed with proper care, they succeed nearly, if not quite as well, when transplanted early in autumn, say in the early part of September. The ground should be well manured and dug a month before transplanting. The chief care required when the work is done in autumn, is to guard against the plants being thrown out by frost, which is best effected by treading the soil closely about the roots.

Culture.—The distance of the plants asunder, where the soil is rendered *sufficiently fertile*, should be, for the larger varieties (such as Methven and Keen's seedling,) twenty inches from row to row and fifteen inches in the row; the smaller varieties may be a little nearer together. This distance may seem too great, but it is much better than crowding the plants too closely, which is the more common error. It is only by affording sufficient room for the plants to receive the benefit of sun, air, and of culture, that the fruit will ripen early, and acquire a good size and agreeable flavor. Keen, of Isleworth in England, a most successful cultivator of this fruit, and who raised the celebrated Keen's seedling, says, in speaking of the large distances he adopted in planting,—"these distances I find necessary, for the *trussess of fruit* in my garden ground are frequently *a foot long*."

The following is his method of culture in his own words: "After the beds are planted, I always keep them as clear of weeds as possible, and on no account allow any crop to be planted between the rows. Upon the growing of the runners, I have them cut, when necessary; this is usually three times in each season.* In autumn I always have the rows dug between; for I find it refreshes the plants materially; and I recommend to those persons to whom it may be convenient, to scatter in the spring, very lightly, some loose straw or long dung between the rows. It serves to keep

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*Lindley says, in speaking of the Alpine strawberries, "If the runners are planted out in August or the beginning of September, the beds will be covered with runners by spring; these should not be removed as directed for the other classes, because the first and strongest of them will produce fruit during the autumn, and continue in succession to a late period of the season. But a succession of finer fruit than these is produced by cutting off all the flower stems as soon as they begin to blossom, from their commencement in spring till the end of June. By this means a most abundant supply of the very finest fruit is produced from the end of July till frost sets in."

the ground moist, enriches the strawberry, and forms a clean bed for the trusses of fruit to lie on; and thus, by a little extra trouble and cost, a more abundant crop may be obtained. A short time before the fruit ripens, I always cut off the runners, to strengthen the root; and after the fruit is gathered, I have what fresh runners have been made taken off with a reaping-hook, together with the outside leaves around the main plant, after which I rake the beds, then hoe them, and rake them again. In the autumn, unless the plants appear very strong, I have some dung dug in between the rows, but if they are very luxuriant the dung is not required; for in some rich soils it would cause the plants to turn nearly all to leaf. I also have to remark, that the dung used for manure should not be too far spent; fresh dung from the stable door, is preferable to spit-dung, which many persons are so fond of."

In thus recommending a thorough method of culture, we would by no means wish to discourage those who have not yet attempted raising this excellent fruit and who think they cannot afford to adopt such culture, from attempting it altogether; indeed, if proper varieties are obtained, good crops may be had with little or no care after transplanting; we have known beds almost untouched for years to yield plentifully. Nevertheless, we consider the *cheapest* method, ultimately, of raising this fruit, is by thorough culture; that the greatest amount of fruit is obtained in this way for the care and labor expended, and that the quality is so much superior to that obtained from slight culture, as to give the former practice very decided advantages.

When the beds have much diminished in their product, new plantations must be made to supply their place. This generally takes place in four or five years.

Strawberries.—This delightful fruit should be more cultivated than it is; for besides being one of the greatest luxuries of the table, it is decidedly one of the best anti-scorbutics that can be used, and is also one of the most effective dentrifices, in the removal of tartar from the teeth, to be found. Those who may contemplate setting out new transplantations, or desire their old beds to flourish, should seize the present moment to plant out the one, and thin and dress the other.

Farmer and Gardener.

CHINESE MULBERRY.

The time having arrived for laying down the Chinese mulberry, the following extract of a letter, dated Sept. 1835, from a gentleman who is practically acquainted with the business, may be of use to new beginners:

"The manner of putting down the mulberry and covering the branches with earth, is *bad, decidedly bad.* Many of them rotted, some wholly and some in part only. I put them down in various ways—some I put down with the tops out —some with the tops covered, and some I broke off—*the last did the best.* Now the way to do the thing as it should be done, is this—I know by experience, and one grain of experience is worth a pound of speculation. My method is thus:

"*Bend the shoot flat to the ground*, nip off the tip or top, *mind that*—secure it with forked sticks, and *do not put any earth upon the branch*, (except where the buds have just started.) The buds will shoot upward with great rapidity, and when about one inch high, *then cover the stalks lightly with earth*, and the fibrous roots will immediately shoot downward, in every direction—this I know. In this way, there is not the least danger of smothering the plant or buds.

"*Remember*, the top must be nipped off, or the plant will grow from that end only, and the buds will not grow so well. I have found, that covering the plant or branch with earth, when first laid down is a great error, at least I think so, with all due deference to your better judgement and experience."

The same gentleman sprouts his seed by placing it on a cloth between sods of turf, and moistening the upper turf with warm water. The foregoing results are so conformable to our own experience of the last year, that we most cheerfully recommend our correspondent's mode of putting down mulberry for layers, and we are doing the same ourselves.—*Northampton Courier.*

From the Silk Culturist.

SILK IN GEORGIA.

Near Thomasville, Thomas Co. Ga.
July 8th, 1836.

F. G. Comstock, Esq.

Dear Sir:—Enclosed you will receive a specimen of white Silk manufactured into cloth by my daughter Charlotte Mitchell, of which she has made eight yards. I raised the worms on my farm, and as I conclude you love to hear of the success attending the raising of silk worms, I have made bold to send you this specimen. I think the worm can be raised as easy here as any place in the union. * * * * * * * * * *

Very truly yours,
Thomas G. Mitchell.

The enclosure in the foregoing letter is a specimen of beautiful white pongee, which, for texture and lustre, has not suffered in comparison with the best foreign article, we have been able to find. The specimen is highly creditable to the industry, ingenuity, and patriotism of Miss Mitchell, and we hope her laudable example of devoting her time and attention to the production of

useful and ornamental articles of dress, will be extensively imitated in all parts of the United States. We repeat what we have often said, if the females of this country would pride themselves on appearing in public clad in silks grown and manufactured by their own hands, an impetus would be given to the silk enterprise which neither prejudice or sloth could withstand.—Ed. Cult.

PRICE OF COCOONS.

We notice in most of the prices current of country produce, copied from the New England Farmer, that cocoons are quoted at $3 per bushel. As this quotation is directly, though unintentionally, calculated both to discourage the growth of silk and induce growers to sell at an under price, we feel it our duty to state that cocoons of the best quality are selling at $5, and those of inferior qualities at proportionable prices. The ordinary price last year was $3, and consequently the editor of the Farmer so quoted them at that time; but they have since advanced, and he has, for some time, omitted to quote them at all. Editors who continue the Farmer's price current, would do well to revise it by a late number, and either strike out cocoons entirely or quote them from $2,50 to $5, which will be according to actual sales.

Since writing the foregoing we have received a letter from our correspondent at Mansfield; by which it appears that they have already engaged the attention of speculators. He says: "Cocoons are selling readily at $5, per bushel, and some have sold for $5, 50 to speculators since I wrote you. There are but few now for sale, the crop being short in consequence of the severity of last winter. I have raised from 15 to 20 bushels."

Silk Culturist.

Substitute for ringing Swine.—Mr. Tubb, an English breeder of stock, has recommended a mode of dealing with these mischievous animals, which it is said may supersede the necessity of putting rings into their nose. It consists simply of shaving off, with a razor or sharp knife, the gristle on the top of the noses of young pigs. The place soon heals over, and the pigs are thus rendered incapable of rooting.—*N. E. Farmer.*

Chickens.—A disease called the gapes, so destructive among chickens, may be prevented, and if not too far advanced, cured by a slight mixture of assafœtida in their food. Four oz. costing 6¼ cts. per oz. dissolved in water and mixed once a day in food, is enough for 400 chickens. If people have no sympathy for the sufferings of those beautiful little birds, they can't fail to have some for themselves, if bacon gets much higher.

From the New England Farmer.

TO FATTEN FOWLS OR CHICKENS IN FOUR OR FIVE DAYS.

Set rice over the fire with skimmed milk, only as much as will serve one day. Let it boil till the rice is quite swelled out; you may add a tea spoonful or two of sugar, but it will do well without. Feed them three times a day in common pans, giving them only as much as will quite fill them at once. When you boil fresh, let the pans be set in water, that no sourness may be conveyed to the fowls, as that prevents them from fattening. Give them clean water or the milk of rice to drink, but the less wet the latter is when perfectly soaked the better. By this method the flesh will have a clear whiteness which no other food gives; and when it is considered how far a pound of rice will go, and how much time is saved by this mode, it will be found to be cheap.

From the New York Farmer.

GREAT PRODUCE OF A COW.

To the Editor of the New York Farmer:

Sir—If you think the following statement of the produce of a cow worth inserting in your valuable Magazine, you can do it.

The cow is of the short horn Durham breed, a twin, her dam having had twins three times in four years; she is a bay, her sister pure white, now in possession of my neighbor Mrs. Post. My cow calved on the 16th of March, her calf remained from her 19 days, raised on the skim milk, until my other cow came in on the 20th of April The produce of butter was in that time, say 35 days, 54 1-2 pounds, and two butchers, although not sold to kill, pronounced her the best and heaviest calf they had seen that season. I will only observe, I keep but two cows and they are kept and fed in the yard.

Yours respectfully,
THOMAS ASH.

From the New England Farmer.

TO KEEP BUGS FROM VINES.

A correspondent of the Maine Farmer says, I last year planted my cucumbers, &c. near where grew some tansy at one corner—soon after up, the "striped jackets" attacked them, except those in the immediate vicinity of the tansy. Observing this, I put around each hill some sprigs of tansy, which caused the bugs to leave them, and by a few applications, so as to keep it somewhat green, were kept off, as the scent is strong and I believe not agreeable to them.

C. D.

East Winthrop, May, 1836.

It is said that branches of the elder laid on each hill will keep bugs from vines.

From the Cultivator.

MATTERS OF INTEREST TO ALL.

We venture to lay down the following propositions, as adapted to our day and country.

1. *Every business in life is mainly dependent, for its prosperity, upon the labors of Agriculture.*

Agriculture is the body, while the other professions are the members; and although the body and members are mutually dependent, and reciprocally useful to each other, the body can exist without the members, much better than the members can exist without the body. The farmer can supply his necessities, and most of his reasonable wants, within the circle of his family; he can feed and clothe himself: but his wants are enlarged, and his ability to gratify them increased, in proportion to the profits of his labor. If through ignorance or sloth he produces only what is necessary for the sustenance of his household, he can buy neither of the merchant, the manufacturer or the mechanic,—nor contribute to the support of the learned professions; or, if he buys, he cannot pay. But if his produce is double what is required for the consumption of his family, the surplus half may be employed for the benefit of the other classes—in purchasing from them the comforts and elegancies of life. The other classes, on the contrary, cannot thrive, as such, without the aid of the farmer: he furnishes the raw materials for the manufacturer, he feeds the mechanic, and freights the bark of commerce; and is besides the principal customer to them all. It follows, as a corrollary, that

2. *The prosperity of a state is determined by the good or bad state of its husbandry.*

We see every where, in districts as well as in entire states, the strongest proofs of the correctness of this proposition. Contrast Dutchess, Orange and Columbia, with any three counties where agriculture is neglected, or managed in the old slovenly manner. In the first, all classes thrive and prosper, if they are industrious and prudent, because there the body is in healthful vigor. In the latter, you will find the body lethargic, diseased, and covered with putrifying sores, and the members partaking of all its infirmities. The last winter's experience, in our cities and towns, shows their extreme sensitiveness to the fluctuations in the supply of agricultural products. Some of the farmers' crops were last year deficient in their accustomed yield, and the consequence was, the buyer had to pay 25 and 50 per cent above the ordinary prices for many articles of the first necessity. Had the products of the soil been double what they were, prices would have been low, and the buying classes would have subsisted cheaper and better, and the farmer would have purchased of them, in return, more liberally.

3. *The improvements and profits of agriculture, and the consequent prosperity of a state, are in the ratio of the measure of intelligence which guides its labors.*

The head can do more than the hands. The animal strength of the ox and the horse would effect no useful purpose, without the contrivance and direction of man. In many countries on the old continent, where the cultivator is debased by ignorance and despotism, the awkward, ill-contrived implements of the primitive ages are still in use; and in some parts of our own land, the hoe, or the rudest machine of a plough, is still substituted for the greatly improved implements of modern times, because the cultivator is ignorant and servile. There is not a manufacturing employment, nor a mechanic art, but has been greatly abridged in its manipulations, and had its fabrics improved in quality, and reduced in price, by the aid of modern science. We say *modern* science, because we consider that some branches are but beginning to develope their practical advantages to useful labor. We verily believe, that science can do more, and will do more, in the coming thirty years, to improve the condition of agriculture, than has been effected in the two last centuries. An intelligent head is deemed of more importance, and commands a higher compensation, in many of our large establishments, than half a dozen mere sinewy arms.—Mind is the lever that moves the material world—the master-spirit that civilizes man, and multiplies his comforts and enjoyments. We acquire knowledge in our business, mechanically, but slowly. The acquisition may be accelerated and augmented, to an amazing extent, by the experience and teachings of men who have made natural and chemical science their study and employment for life. There is another consideration which renders the improvement of the mind of public benefit: ignorance begets indolence, and indolence begets vice. If we would, therefore, inculcate virtue, we must foster industry; and if we would make industry respectable and desirable, we must throw light upon its paths, and secure for it merited reward.

If we have succeeded in establishing our propositions, it results as a consequence, that the improvement of our agriculture is of the first importance to every class of our population; and that this improvement can in no way receive such efficient aid, as by instructing the youth who are hereafter to manage its concerns, as well in the science as in their practice of the business.

We have drawn the reader's attention to the subject at this time, that the measures necessary to produce the desired result may undergo a thorough and timely investigation, and that our citi-

zens may be prepared to co-operate in such of them, as may seem best adapted to subserve the public weal, before the coming winter. The distributive share to New York, of the surplus revenue, which congress, with great unanimity and wisdom, has directed to be divided among the states, will probably amount to between two and three millions of dollars. And the question will present itself to our next legislature, and upon which they will want an expression of the public wish, to what objects, and in what manner shall these monies be applied? Shall they be expended on internal improvements, on education, and in improving our agriculture, upon either or all of them, exclusively, where their benefits cannot fail to be general, and important, and abiding,—or shall they go into the general fund, where their benefits are likely to be more partial and transitory?

As pertinent to this subject, we would ask the reader's attention to the extract in our young men's department, from "First Lessons in Political Economy,', by Professor McVickar, of Columbia College, a little work which the man as well as boy may peruse with profit.

KEEP ACCOUNTS.

The farmer ought not only to keep accounts with himself, so as to be able to review at the end of every year his receipts and expenditures—to tell whence his cash comes and whither it goes; but with his several fields, his crops, his sheep, cattle, horses, swine, poultry. He should at least do this with great particularity till he shall be master of the subject, and can trust his judgment with some confidence. For want of accurate accounts, farmers are often deceived, raise unprofitable crops or animals, or pursue unprofitable methods of cultivation or feeding. Sometimes, too, they abandon a pursuit really advantageous to them, under the false notion that they can do better some other way.

We have published several specimens of such accounts. A little practice will make the business easy; and it will give you not only the satisfaction of knowing the pecuniary results of this or that crop or method, but will awaken new interest in the whole process by which land is prepared and a crop matured. It will enable you to determine the value of the hints you get from reading, and whether it really is more profitable to cultivate five acres thoroughly and skilfully than ten at hap-hazard. And now, while preparing your fields and sowing your seed, is a good time to begin.—*Vt. Farmer.*

Truth is the same to the understanding that music is to the ear, or beauty to the eye.

Lord Kaimes.

HAY MAKING.

We make the following extracts from Prof. Low's Elements of Practical Agriculture, to strengthen the recommendation we have frequently made, of *making hay in the cock.* This mode we consider entitled to preference, for the substantial reasons, that the hay thus made requires less labor, is less liable to injury from rain and dew, is less exposed to the wasting effects of a hot sun, retains more of its juices, and is more sweet, fragrant, and of better color, than when cured in the ordinary way.

"The swaths lie for a short time to wither; and are then turned gently over by a fork or the handle of the hay rake, in such a manner that they shall not be broken or spread abroad. In 24 hours or more afterwards, they may be put into small heaps or cocks, on every third or fifth ridge, according to the bulk of the crop, the ground being at the same time carefully raked.

"It is a good practice to put up the hay green in these first cocks, and then to enlarge them by putting two together. If at this early stage they undergo a degree of incipient fermentation, it is no matter. It is in the later stages of the process that heating or fermentation becomes hurtful.

"In the making of hay, the great end to be aimed at is, to prepare it as quickly as possible, *and with as little exposure to the weather, and as little waste of the natural juices,* as circumstances will allow. When we are enabled to do this, the hay will be sweet, fragrant, and of a greenish color.

Albany Cultivator.

ENGLISH HUSBANDRY.

The whole Island of Great Britain is a garden, compared with the state of cultivation generally adopted in this country; but it is in the immediate vicinity of London that horticulture is carried to the greatest perfection. The number of acres devoted to kitchen and fruit gardens and nurseries, is estimated at about 6500 acres, of which 2000 are said to be cultivated by the spade. Radishes, spinach and onions, are sown soon after christmas, and other seeds as early as the season will permit, which is generally in the month of February. The same ground is planted with cauliflowers as thick as though it was occupied by no other plants.—The radishes, &c. are carried to market, and when the cauliflowers are large enough to be earthed up, cabbages are planted on the same ground, and after they are removed the ground is cleared and planted with endive and celery. The average profit from an acre, thus cultivated, is estimated at £200.

The fruit gardens in the vicinity of Kensington, Hammersmith, Brentford, Islesworth and Twickenham, are supposed to cover about 3000

acres, besides those attached to private houses and gentlemen's villas. These gardens have what is called an upper and under crop. The ground is first stocked with apples, pears, cherries, plums, walnuts, &c., which are called the upper crop. It is then planted with strawberries, gooseberries, raspberries, currants, and such other shrubs and herbaceous plants as will endure the shade, which is called the under crop. These gardens require the constant labor of ten or twelve persons, men, women and children, to the acre, during the whole season, and while the fruit is being gathered and carried to market, about forty persons are employed. The average produce of an acre cultivated in this manner is estimated at £100. Some of these gardens are also stocked with wall fruits, such as nectarines, peaches, apricots, plumbs, &c., which much increases the labor, and proportionably adds to the profit.

The nursery grounds are principally in the vicinity of Chelsea, Brompton, Kensington, Hackney, Dalston, Bow and Mile End, and are estimated to occupy about 1500 acres. These grounds are highly cultivated, their occupier sparing neither labor nor expense to have the greatest variety and the choicest kinds of fruit trees, ornamented shrubs and flower plants. They are collected from all parts of the world, and brought to the highest degree of perfection.—Since a taste for the cultivation of real and beautiful shrubs and plants has become generally prevalent, both on the island and the continent, the nursery men make large profits. Considerable quantities are annually exported to France, Spain, Portugal, Italy, Russia, and other European countries.

The high price of land in England renders high cultivation indispensable to a livelihood.—Were tenants to bestow no more labor upon their land than our ordinary owners in fee, they could not even pay their rent, tithes and pauper taxes, and much less support their families. As an instance of the exorbitant price of land, we refer to the late sale of the estate of the Marquis of Ormonde, called Berry Hill, Staffordshire. It contained 194 acres, and was purchased by the Lord Mayor of London for 18,000 guineas, 84,000 dollars.—*Silk Culturist.*

THE FOOD OF MAN.

The Genesee Farmer gives this amusing summary of the native countries of our familiar plants:

The Potatoe is a native of South America and is still found wild in Chili, Peru, and Monte Video. In its native state, the root is smaller and bitter. The first mention of it by European writers is in 1588. It is now spread over the world. Wheat and Rye originated in Tartary and Siberia, where they are still indigenous. The only country where the Oat is found wild is in Abysinia, and thence may be considered a native.—Maize, or Indian corn, is a native of Mexico, and was unknown in Europe until after the discoveries of Columbus. The bread Fruit tree is a native of the South Sea Islands, particularly Otaheite. Tea is found a native nowhere except in China and Japan, from which the world is supplied. The Cocoa Nut is a native of most equinoctial countries, and is one of the most valuable of trees, as food, clothing, and shelter are afforded by it. Coffee is a native of Arabia Felix, but is now spread into both the East and West Indies. The best coffee is brought from Mocha, in Arabia, whence about fourteen millions of pounds are annually exported. St. Domingo furnishes from sixty to seventy millions of pounds yearly. All the varieties of the Apple are derived from the crab-apple, which is found native in most parts of the world. The Peach is derived form Persia, where it still grows in a native state, small, bitter, and without poisonous qualities. Tobacco is a native of Mexico and South America, and lately one species has been found in New Holland.—Tobacco was first introduced into England from North Carolina, in 1586, by Walter Raleigh.—Asparagus was brought from Asia; Cabbage and Lettuce from Holland; Horse Radish from China; Rice from Ethiopia; Beans from the East Indies; Onions and Garlick are natives of various places both in Asia and Africa. The Sugar Cane is a native of China, and the art of making sugar from it has been practised from the remotest antiquity.

DON'T EAT THOSE GREEN APPLES.

At this season of the year children are exceedingly apt to fill their stomachs with green fruit, especially apples, and as a consequence bring on severe bowel complaints. This may be one of the causes or reasons why complaints of this nature are more prevalent during this season of the year than any other. Parents should be careful to guard against it and to prevent as much as possible any indiscretion on the part of their children, or people under their charge, in this respect.—We have no objection to ripe fruit of any kind if used with moderation, indeed it is often very pleasant and salutary to invalids, but care should be taken that it be perfectly ripe, and not half grown, green and indigestible.

Maine Farmer.

To form a vigorous mind.—Let every youth early settle in his mind, that if he would ever be any thing, he has got to make himself, or in other words, to rise by his personal application; let him always try his own strength, and try it effectually, before he is allowed to call upon Hercules. Put him first upon his own invention; send him back

again and again to the resources in his own mind, and make him feel that there is nothing too hard for industry and perseverance to accomplish. In his early and timid flights, let him know that stronger pinions are near and ready to sustain him, but only in case of absolute necessity. When in the rugged paths of science, and difficulties which he cannot surmount impede his progress, let him be helped over them; but never let him think of being led when he has power to walk without help; nor of carrying his ore to another's furnace, when he can melt it down in his own.

From the Southern Literary Messenger.

ADVANTAGES OF MANUAL LABOR SCHOOLS.

Extract from an Address delivered by the Rev. B. F. Stanton before the "Literary Institute" of Hampden Sydney College.

* * * * * The following important positions, however, in regard to the subject, may now be considered as established. Constant habits of exercise are indispensable to a healthful state of the body. A healthful state of body is essential to a vigorous and active state of mind. The habit of exercise should commence with the ability to take it, and should be continued with that ability through life. Of the different kinds of exercise, as a general rule, agricultural, being the most natural, and to which the human constitution is best adapted, is the most unobjectionable; *mechanical* is the next; and walking and riding are the employments which follow in the rear. The exercise most profitable, for the most part, will be that which is most useful. The neglect of exercise with sedentary men, has occasioned fearful havoc of health and life; and the wilful neglect of it with those who have had an opportunity to be enlightened with respect to its necessity and value, is a species of suicide, and therefore, *an immorality*. The connection of *manual labor establishments with literary institutions*, has been found to be greatly conducive to health and morals, as also to proficiency in the various departments of human learning; and as far as experience has gone, the promise which they give of success is all that their most sanguine projectors had anticipated.

On the subject of *manual labor schools*, a deep interest has within a few years been excited in various parts of the Union. Like all other enterprises which aim at the accomplishment of extensive good, it has met with opposition and discouragements; but originating in the principles of true wisdom, and supported by arguments and facts which none can gainsay or resist, its ultimate triumph may safely be predicted and confidently anticipated.

Whether the system of physical education shall receive the countenance, or is suited to the peculiar circumstances of the southern country, may with some be made a question; but we are ready to hazard the assertion, that whatever obstacles of a peculiar nature may here lie in the way of reducing it to practice, if properly considered, they must be seen to be in truth the most powerful inducements that can be urged for its adoption.

The country in which physical education cannot prevail, in the onward march of improvements for which the present age is distinguished, must necessarily be destined to be outstripped in the pursuit of those objects which constitute the felicity and the glory of a people. That this country is to fall behind and to be contented to remain there, is to suppose an event too disreputable for tolerance, and too much opposed to a laudable spirit of emulation to be cheerfully acquiesced in. The south needs men of vigorous constitutions for professional avocations and other purposes, as well as the rest of the world, and if she has them, must obtain them by the same process. Trained on a different plan, her sons, in comparison with others, will be effeminate and inefficient. Many of them, as has happened with others in past times, would become the prey of incurable disease or fall the victims of an untimely grave.—According to the most accurate investigations that have been made, at least *one-fourth* of the individuals who, for several years past, have been educated in our American colleges, have been completely prostrated in their course, or have survived only to drag out an existence rendered burdensome to themselves and unprofitable to others. The voice of warning on this topic, while mournful and alarming, is as "*the voice of many waters.*"

* * * * * *

In opposition to the system of education which we would defend, a voice of objection has been raised, to which it may not be improper to pay a passing regard.

It has been preferred as an objection to manual labor schools, which we shall assume, are, on the whole, the most unexceptionable expedient that has been proposed for connecting exercise with a course of literary training,* that *youth who have been unaccustomed to manual labor, and who have been permitted to indulge in idleness and sportive amusements for the purpose of recreation, will feel an insuperable aversion to the toils and restraints which such a revolution in their habits, as the one contemplated, will impose on them.*

The process of *taming*, though quite essential to the unruly, to "flesh and blood" is never "joy-

*Gymnastic exercises are both dangerous and frivolous.

ous, but rather grievous." The objection started is something like that which the celebrated Rush, in some of his original effusions has observed is met with in the case of certain morbid patients, whose *weak stomachs refuse milk as a diet.* The food itself, in the judgment of the acute physician, is of the most simple, inoffensive, and invigorating character; and *the fact that it is rejected is the proof that it is needed.* The intemperate can ill brook the privation of *alcohol*; the epicure and debauchee will not relinquish with good will the gratification of inordinate appetites; nor will the *slothful*, who *turns himself in his bed as the door on its hinges*, give up with cheerfulness *the luxury of laziness.* But the true and proper question for determination is, would it not be doing to loungers and profligates themselves, as well as to others, a kindness, to put them upon a course of *regimen*, (provided it can be done without too great an exertion of violence) which should bring them back to nature, and constrain them to a just and proper observance of the salutary laws of industry, sobriety and temperance? With such an authority, we think that the parents and guardians of youth every where should be invested; and those who should manifest a spirit of insubordination against its exercise, if that spirit could not be quelled by a temperate yet firm resistance, would exhibit the proof of a temper that ought to be regarded in a young man *as a positive disqualification for receiving an education.*

From the New York Farmer.

New mode of overcoming steep Inclined Planes on Railways.

I witnessed at the capitol with great pleasure on Monday last, Mr. Smith Cram's (of the city of New York) invention for overcoming an elevation in rail road transportation of 440 feet to the mile. It was performed with expedition by a single stroke perpendicular engine, which, in point of power, suffers much in comparison with a double stroke locomotive engine.

His plan as exhibited, puts at rest all doubt as to the practicability of ascending and descending hills from 450 to 600 feet to the mile, with certainty and security. As to the certainty of overcoming elevation and inclination, the cog-wheels and ratchets as arranged satisfactorily show. As to the security, it is to be found in the introduction of his hydrostatic cylinder attached to the car which is designed to check the train of cars in ascending, should any accident befal the engine and to regulate their velocity in descending, or check them altogether. The accuracy of the principle in both cases is perfectly clear, and promises to to be of incalculable value in the present age of improvement; and I doubt not it will be generally adopted on the score of economy as to time and money; but above all, the preservation of human life, which his plan so effectually guarantees in comparison with the present mode of overcoming a trifling elevation by stationary power, committing our lives to the hazard of a single rope.

FULTON.

From the Albany Cultivator.

FROM A FATHER TO HIS SON.—No. VI.

SOCIAL AND RELATIVE DUTIES.

I mean the duties which every man owes to others and to society: and from the performance of which, from christian or benevolent motives, flows the purest and sweetest pleasures that fall to the lot of man. To do good unto others is not only a cardinal Christian duty, but it is a civil duty of the highest grade. It is a duty which blends itself in all the concerns of life, from the performance of which, no class is exempt, and which has an intimate bearing upon the good order and happiness of society. Were I to give an illustration of its best influence upon society, in a collective body of men I should point you to the society of Friends. As an entire class, they are probably more exemplary, in the performance of the social and relative duties of life, than any other class. I speak not of their religious tenets; but only of the influence which these appear to have upon their secular or worldly conduct. Their habits of industry, temperance, brotherly love and general benevolence, are worthy of high commendation, and of general imitation.

To discharge these duties suitably, you ought to become impressed with the belief of their importance, resulting as well from a consciousness of duty, as from a conviction that your individual happiness depends, in a great measure, upon their performance. There is a mutual dependence upon each other among the various classes of society, like that of the members of the human body. The manufacturer depends upon the farmer and others for the sale of his fabrics, and the means of his subsistence. The mechanic and the professional man have a like dependence upon other classes; and the farmer, though most independent, is greatly indebted to the other classes for his prosperity, and the social enjoyment of civilized society. *Each class flourishes best when all classes flourish most.* Hence every individual acts wisely, who endeavors to promote the prosperity of all.

Let, therefore, no narrow-minded jealousy, or envious rivalship, deter you from the performance of a duty to a neighbor, or from rejoicing in the success of his honest labors—for you are in many ways benefitted by his success; but rather strive to commend him, by following his example in whatever is meritorious. A little pecuniary aid,

the influence of your own good conduct in economising time and money, and in practising the charities of life, and even a friendly and kind deportment may effect much among your acquaintances, to preserve them from bad habits, and in rendering them useful and respectable in society. It is through the influence of individuals, thus exerted, that communities are elevated in their character and enjoyments. We may, by precept and example,—by affection and kindness, win men to good habits; but we can seldom induce them to adopt those habits by coercion, or by a cold repulsive demeanor. We must illustrate, in our own persons, their benign influence, if we would persuade men to practise the virtues which adorn life, and impart to human beings their highest felicity.

The man who seeks to promote only the interest of self—who would make the labors of others tributary to his wants, without reciprocating the favor to society, in some way, is an insulated being, an alien in the human family, a stranger alike to the sympathies and enjoyments which were designed to elevate him in the scale of intelligent beings.

PRODUCTIVE POWER OF LAND.

We are not among the number, who believe it necessary for our young agriculturists, to penetrate the western wilderness for the purpose of obtaining a subsistence or accumulating wealth —we are not of the opinion of the farmer who removed one hundred miles from his neighbors to avoid being annoyed by them, and when one of them located himself within fifty miles of him, considered it an insult, and said he did not thank him for sticking down right under his nose. Neither do we believe that war, pestilence, famine, intemperance, and crime are necessary, as checks upon the increase of production and preventives of a redundancy which the products of the earth could not sustain. But we do believe, that in the present state of the arts, rural economy may be carried to such an extent, that even New England might sustain, in comparative comfort and affluence, more than fifty times its present population.

That we have not overrated the productive power of land, perfectly cultivated, is evident from the fact, that there are large provinces in India, where a population of from four to six hundred inhabitants to the square mile, are supported by agriculture.

There is also an island on the eastern coast of China, containing one thousand square miles, and a population of 400,000. Agriculture, and horticulture are the exclusive pursuits of the inhabitants, and their crops are limited to rice, cotton, millet, and culinary vegetables.

A Hint to Silk Culturists.—"Experience has shown that the floss, or tow, should not be boiled previous to carding, as directed by Cobb in his Manual; but carded with cotton cards as it comes from the cocoons, and made into round rolls and spun like wool. The floss should not be cut as directed by some."

Fowl Lice.—When confined, or when simply roosting, in an enclosed house, hens are apt to become infested with lice, in the warmer months.—Dry wood ashes, put on the ground where they dust themselves, will very soon free them.

ADDITIONAL LIST OF AGENTS.

James Harper, Harpers Store, N. C.
Thomas Bowehill, Wilksboro', N. C.
Thomas Mitchell, Morganton, N. C.
David Chandler, North Cove, N. C.
James H Greenlea, do. do.

JOHNSON'S

THRESHING MACHINE.

WE, the undersigned, do certify that we have seen Henry Johnson's

Patent Threshing Machine

in operation, by a two horse power, which threshes at the rate of 48 doz. of wheat per hour, which is effectually cleaned. Given under our hand and seal.

JOHN L. WILLIAMS,
JOHN G. RUBLE,
ARCHIBALD WILLIAMS,
WM. G. LOONEY,
JESSE B. HUNTER,
GEORGE W. HOSS,
HENRY MASSENGILL,
JOHN HOSS,
MICHAEL MASSENGILL.

NOTICE!

THE Subscriber now offers for sale, either individual, County, District, or State, Rights for making, using or vending the above valuable machine, which may be seen in operation at the plantations of Mrs. Sarah Hamner, and William Massengill, in Washington county, E. Ten. Apply at Mr. John Hoss' on Brush creek, or to the subscriber, in the neighborhood of said Hoss.

Sept. 6th, 1836.—p HENRY JOHNSON.

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